

Application No. : 10/679,963
Amdt. Dated : March 23, 2005
Reply To O.A. Of : December 23, 2004

Amendments To The Claims

The following listing of claims replaces all prior versions and listings of claims in the application. The listing of claims presents each claim with its respective status shown in parentheses.

Claims 1 – 10. (Canceled).

Claim 11. (Currently Amended) An optical probe capable of outputting a signal indicative of light transmitted through body tissue, the optical probe comprising:

one or more emitters capable of emitting light;

detector circuitry capable of detecting light transmitted through body tissue of a patient and outputting a signal usable to determine at least one physiological parameter of the patient;

a probe housing including a first positioning member and housing the one or more emitters and the detector circuitry;

a substantially circular substantially convex one-or-more protruding
emitter lenses protruding a distance from the probe housing;

a substantially circular substantially convex one-or-more protruding
detector lenses protruding about the distance from the probe housing;

a protruding optical barrier protruding about the distance from the probe housing between the ~~one-or-more~~ protruding emitter lenses and the ~~one-or-more~~ protruding detector lenses, wherein the protruding optical barrier is positioned to reduce an amount of emitted light capable of reaching the detector circuitry without being transmitted through body tissue; and

an attachment mechanism including at least one second positioning member mechanically mateable with the first positioning member to position the probe housing with respect to the attachment mechanism, wherein attachment of the attachment mechanism to the body tissue positions the probe housing against the body tissue with sufficient pressure to noninvasively recess the protruding optical barrier into the body tissue and to noninvasively recess the ~~one-or-more~~ protruding emitter lenses and the ~~one~~ ~~or-more~~ protruding detector lenses into the body tissue substantially along a plane thereof.

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Claim 12. **(Previously Presented)** The optical probe of Claim 11, wherein the attachment mechanism further comprises a pressure applicator capable of applying sufficient pressure against the probe housing to assist the attachment mechanism in accomplishing the noninvasive recessing.

Claim 13. **(Previously Presented)** The optical probe of Claim 12, wherein the pressure applicator comprises a substantially convex biasing member.

Claim 14. **(Previously Presented)** The optical probe of Claim 11, wherein the attachment mechanism comprises a headband.

Claim 15. **(Previously Presented)** The optical probe of Claim 14, wherein the headband further comprises:

a plurality of the second positioning members, each member mechanically mateable with the first positioning member to provide for a plurality of potential positions of the probe housing with respect to the attachment mechanism; and

indicia on the headband instructing a caregiver which of the potential positions will apply a predetermined amount of pressure against the probe housing.

Claim 16. **(Previously Presented)** The optical probe of Claim 15, wherein the indicia include ruler-like indicia.

Claim 17. **(Previously Presented)** The optical probe of Claim 11, wherein the attachment mechanism comprises an adhesive tape.

Claim 18. **(Previously Presented)** The optical probe of Claim 17, wherein the second positioning member is substantially centered with respect to the adhesive tape.

Claims 19 – 23. **(Canceled).**

Claim 24. **(New)** The optical probe of Claim 11, wherein the emitter lens protrudes a range of about 0.025 to about 0.075 inches.

Claim 25. **(New)** The optical probe of Claim 24, wherein the emitter lens protrudes about 0.050 inches.

Claim 26. **(New)** The optical probe of Claim 11, wherein the detector lens protrudes a range of about 0.010 to about 0.040 inches.

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Claim 27. (New) The optical probe of Claim 26, wherein the detector lens protrudes about 0.020 inches.

Claim 28. (New) The optical probe of Claim 11, wherein one of the one or more emitters emits light at a wavelength unexpected by an oximeter communicating with said optical probe, and wherein said unexpected wavelength causes the oximeter to determine more accurate values for said at least one physiological parameter.

Claim 29. (New) The optical probe of Claim 28, wherein said unexpected wavelength ranges from about 650 to about 660 nanometers.

Claim 30. (New) The optical probe of Claim 29, wherein said unexpected wavelength comprises about 654 nanometers.